

## VITA

NAME: Johannes W. Schwank

EDUCATION: Ph.D. (Physical Chemistry), University Innsbruck, Austria 1978  
Chemistry Diploma, University Innsbruck, Austria 1975

POSITIONS at the University of Michigan: James and Judith Street Professor of Chemical Engineering 2008 – present  
Professor of Chemical Engineering 1990 - present  
Director, Transportation Energy Center 2005 - present  
Chairman, Department of Chemical Engineering 1990 - 1995  
Associate Director of Electron Microbeam Analysis Laboratory 1986 - 2000  
Associate Professor of Chemical Engineering 1984-1990  
Assistant Professor of Chemical Engineering 1980 - 1984  
Engineering Research Associate in Chemical Engineering 1979 - 1980  
Postdoctoral Scholar and Lecturer in Chemical Engineering and Lecturer in Materials and Metallurgical Engineering 1978 - 1979

POSITIONS at Other Institutions: Visiting Professor, Technical University of Vienna, Austria 1988  
Visiting Professor, University of Innsbruck, Austria 1987 -1988  
Graduate Research and Teaching Assistant, Institute of Physical Chemistry, University Innsbruck, Austria 1975 -1978

HONORS, AWARDS: Chemical Engineering Departmental Excellence Award, 2005  
Giuseppe Parravano Award for Excellence in Catalysis Research, 1994  
Research Excellence Award, College of Engineering, U of M, 1989  
Class of 1938 E Distinguished Service Award, U of M, 1986  
Outstanding Teaching and Leadership Award, Phi Lambda Upsilon, 1984  
Fulbright-Hays Scholar, 1978  
Fellowship, Society of Austrian Chemists, 1976,1977  
Academic Merit Awards, Federal Ministry for Science and Research, Austria 1974,1976-1978  
Listed in Marquis "Who's Who In the World", "Who's Who In America", "Who's Who In the Midwest", "Who's Who in Science and Engineering", "Who's Who in Finance and Industry"  
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MEMBERSHIPS: American Institute of Chemical Engineers (AIChE)  
(Treasurer, Detroit Chapter, 1990 – 1993, Board Member 2000 – date))  
American Chemical Society (ACS)  
American Society for Engineering Education (ASEE)  
Materials Research Society  
North American Catalysis Society  
Michigan Catalysis Society (President, 1984/85)

## PUBLICATIONS

1. 'An Infrared Study of CO Adsorption on Magnesia-Supported Ruthenium, Gold, and Bimetallic Ruthenium-Gold Clusters', J. Schwank, G. Parravano, and H. L. Gruber, Journal of Catalysis **61**, 19-28 (1980)
2. 'Cyclopropane Hydrogenation on Ru and Ru-Au Catalysts', S. Galvagno, J. Schwank, and G. Parravano, Journal of Catalysis **61**, 223-231 (1980)
3. 'Isotopic Oxygen Exchange on Supported Ru and Au Catalysts', J. Schwank, and G. Parravano, Journal of Catalysis **63**, 415-424 (1980)
4. 'Bimetallic Ru-Au Catalysts: Effect of the Support', S. Galvagno, J. Schwank, G. Parravano, F. Garbassi, A. Marzi, and G. R. Tauszik, Journal of Catalysis **69**, 283-291 (1981)
5. 'Ethane and Propane Hydrogenolysis on Ru Catalysts', S. Galvagno, J. Schwank, G. Gubitosa, and G. R. Tauszik, J. Chem. Soc., Faraday Transactions I, **78**, 2509-2520 (1982)
6. 'MgO as Catalyst Support: The Influence of Chlorine', A. G. Shastri, A. K. Datye, and J. Schwank, Applied Catalysis, **3**, 131-139 (1982)
7. 'Alumina-Supported Triosmium Clusters and Ensembles: Characterization by High-Resolution Transmission Electron Microscopy', J. Schwank, L. F. Allard, M. Deeba, and B. C. Gates, Journal of Catalysis **84**, 27-37 (1983)
8. 'Catalytic Gold: Applications of Elemental Gold in Heterogeneous Catalysis', J. Schwank, Gold Bull., **16**, 103-110 (1983)
9. 'Gold-Titania Interactions: Temperature Dependence of Surface Area and Crystallinity of TiO<sub>2</sub> and Gold Dispersion', A. G. Shastri, A. K. Datye, and J. Schwank, Journal of Catalysis **87**, 265-275 (1984)
10. 'Characterization of Bimetallic Ruthenium-Gold Catalysts by Analytical Electron Microscopy and Test Reactions', A. K. Datye and J. Schwank, Proceedings of the 8th Internat. Congress on Catalysis, Berlin 1984, Volume IV, p.587-598, Verlag Chemie, Weinheim, West Germany (1984).
11. 'Analytical Electron Microscopy of Supported Bimetallic Catalysts', A. K. Datye, L. F. Allard, and J. Schwank, Analytical Electron Microscopy-1984, p.205-208, D. B. Williams and D. C. Joy, Eds., San Francisco Press, 1984.
12. 'Stability of Osmium Carbonyl Cluster Catalysts in Different Reaction Environments', A. K. Datye, L. F. Allard, Jr., J. Schwank, and B. C. Gates, Proceedings, 42nd Annual Meeting of the Electron Microscopy Society of America, G. W. Bailey Ed., San Francisco Press, San Francisco, CA 1984, p.660-661.
13. 'Influence of Chlorine on the Surface Area and Morphology of TiO<sub>2</sub>', A. G. Shastri, A. K. Datye, and J. Schwank, Applied Catalysis **14**, 119-131 (1985)
14. 'Fischer-Tropsch Synthesis on Bimetallic Ruthenium-Gold Catalysts', A. K. Datye and J. Schwank, Journal of Catalysis **93**, 256-269 (1985)
15. 'Application of High-Resolution Analytical Electron Microscopy to the Analysis of Automotive Catalysts', R. K. Herz, E. J. Shinouskis, A. Datye, and J. Schwank, Ind. Eng. Chem. Prod. Res. Dev. **24**, 6-10 (1985)
16. 'Gold in Bimetallic Catalysts', J. Schwank, Gold Bull., **18**, 2-10 (1985)
17. 'Metal Dispersion of Bimetallic Catalysts via Stepwise Chemisorption and Surface Titration, I. Ru-Au/SiO<sub>2</sub>', A. G. Shastri and J. Schwank, Journal of Catalysis **95**, 271-283 (1985)
18. 'Metal Dispersion of Bimetallic Catalysts via Stepwise Chemisorption and Surface Titration, II. Ru-Au/MgO', A. G. Shastri and J. Schwank, Journal of Catalysis **95**, 284-288 (1985)
19. 'CO Hydrogenation Catalyzed by Alumina-Supported Osmium: Particle Size Effects', E. O. Odeunmi, B. A. Mantrana, A. K. Datye, L. F. Allard, J. Schwank, W. H. Manogue, A. Hayman, J. H. Onuferko, H. Knözinger, and B. C. Gates, Journal of Catalysis **95**, 370-384 (1985)
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21. 'The Role of the Zeolite in the Hydrogenolysis of C<sub>2</sub> and C<sub>3</sub> Hydrocarbons on RuNaY Catalysts', D. J. Sajkowski, J. Y. Lee, J. Schwank, Y. Tian, and J. G. Goodwin, Jr., Journal of Catalysis **97**, 549-560 (1986)

22. 'The Influence of Hydrazine Reduction on Metal Dispersion and Support Morphology in Bimetallic Ru-Au/MgO Catalysts', A. G. Shastri and J. Schwank, Journal of Catalysis **98**, 191-203 (1986)
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24. 'Electron Microdiffraction Study of Bimetallic Ru-Au/MgO Catalysts', A. G. Shastri and J. Schwank, Journal of Catalysis **100**, 437-445 (1986)
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